J. McKENZIE.

Churn.

No. 68,097. Patented Aug. 27, 1867.

Fig. 1.

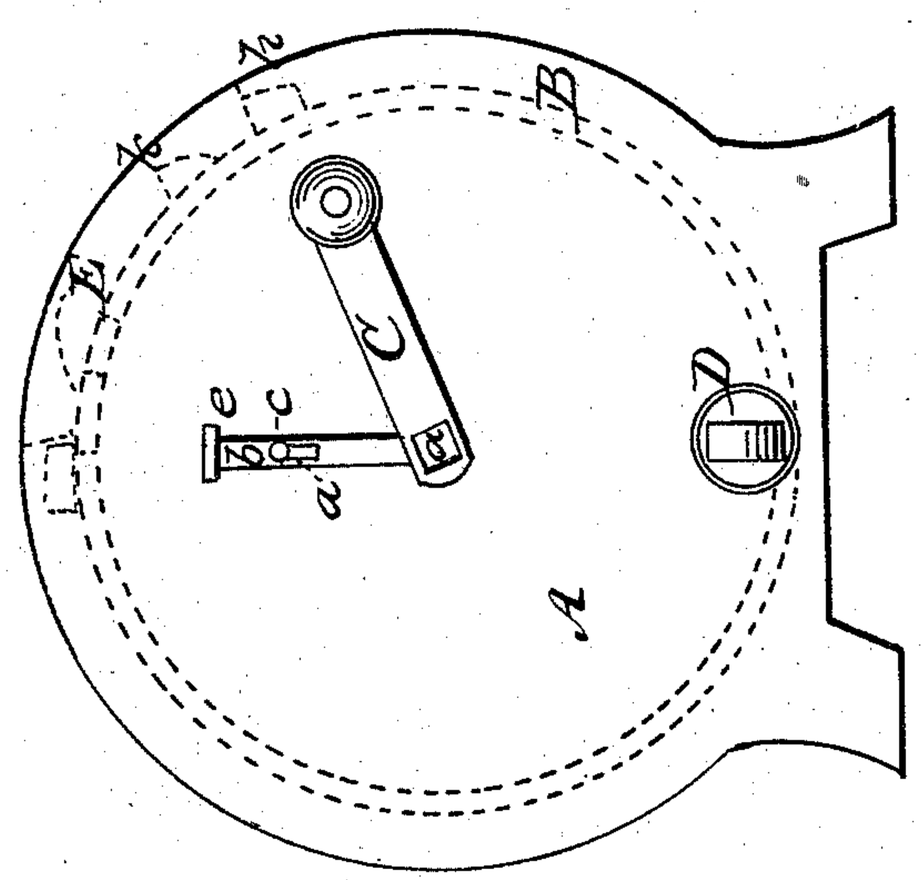


Fig. 2.

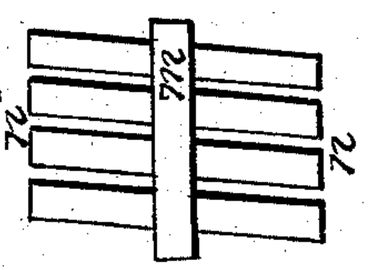


Fig. 3.

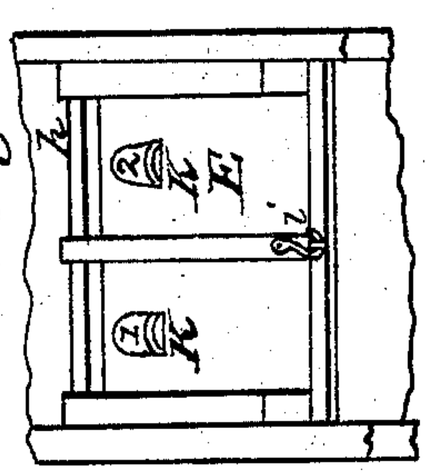


Fig. 4.

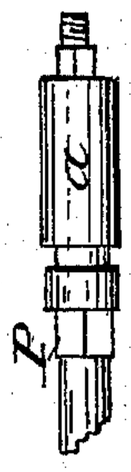
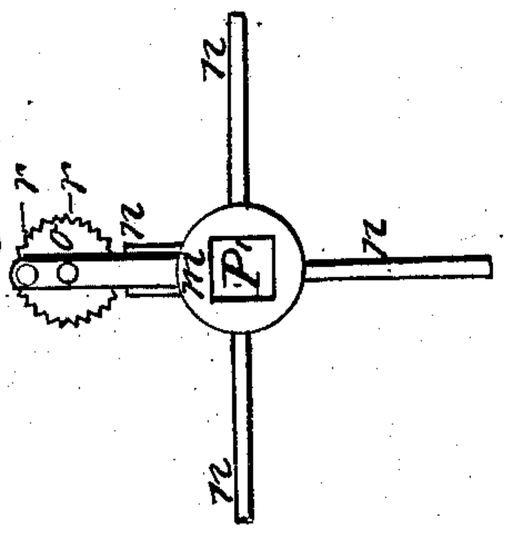


Fig. 5.



Witnesses:
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United States Patent Office.

JOHN McKENZIE, OF PORTLAND, MAINE.

Letters Patent No. 68,097, *dated August* 27, 1867.

IMPROVEMENT IN CHURNS.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, JOHN McKENZIE, of Portland, in the county of Cumberland, and State of Maine, have invented a new and useful improved Churn; and I hereby declare the following to be a full, clear, and exact description thereof, which will enable others to make and use my invention, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a side elevation of my invention.

Figure 2 is a view of the inclined fingers of the dasher.

Figure 3, a view of the cover and ventilators.

Figure 4, a view of a portion of the shaft.

Figure 5, an end view of the dasher.

My invention has relation to that description of churns called rotary churns, or where the motion of the dasher is in a circle around a centre. I do not claim a rotary churn, but certain improvements in relation thereto, which I will proceed to describe.

A shows the circular body, the place of the insertion of the cylinder being indicated by the dotted lines B. C shows the crank, and *a* the end of the shaft. *b* is a sliding catch, working in a channel in the side A, and having the pin *c*, slot *d*, and thumb-piece *e*. The catch may be pushed up or down. When up the shaft *a* can be withdrawn from the churn; when down, the lower end slides into the circular groove *f*, fig. 4, and secures the shaft. D shows the outlet of the churn. E shows the curved cover of the churn and its position, as seen at dotted lines E in fig. 1. The lower edge of the cover fits under a lip or flange, *h*, to prevent leakage. The upper edge is secured by hook *i*. *k k'* show two vents or ventilators in the churn cover. Their position is seen at *k*, fig. 1. It will be seen that they are so placed and so formed as to admit of the free ingress and egress of air, and still not to allow of the escape of any of the contents of the churn, having apertures on the upper ends, and rounded covers on the outside to prevent any of the contents of the churn from being thrown out by the revolution of the dasher. These rounded covers, 1 2, are also curved or concave in the inner, as they are convex on the outer sides, and have their apertures opening upwards. *m* shows the drum or hollow cylinder, bearing the fingers *n* and grooved adjustable roller *o*. Into this drum is inserted the shaft *a*, and it turns the drum and dasher by the square portion *p*, fitting the square or rectangular aperture *p'*. The fingers *n* are inclined in their position on the drum, as seen in fig. 2. *o* is the roller, held by pivots fitting into the holes *r r*. Short fingers *n* fill the space between the roller and drum. This roller *o* has several offices. It serves to carry the air into the cream, as the revolution of the drum or shaft gives it motion, both by its grooves and its simple revolution. It also serves as a washing-roller for the butter when made. Moreover, when passing through the cream, its motion on its own axis aids in breaking the globules of the cream, and facilitates the operation of forming the butter. The inclination of the fingers *n*, fig. 2, effects, in a more thorough manner than if made at right angles to the drum, the reaching of all parts of the interior of the receptacle. The dasher, fig. 5, is removed from the churn by lifting the curved cover E, raising the catch *b*, and pulling out of the drum *m* the shaft *a*, when the dasher can be raised through the opening left by the removal of the cover. The interior of the churn is in shape a smooth, short cylinder hollowed out. The sides are made of pieces of suitable wood, having circular grooves, in which is bent the band or loop (dotted lines B) forming the circular or cylindrical body.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The dasher, when composed of the hollow drum *m*, inclined fingers *n*, and adjustable washing-roller *o*, all operated by the removable shaft *a*, as and for the purposes specified.

2. The curved ventilating cover E, constructed with the parts and applied as herein described, and for the purposes set forth.

JOHN McKENZIE.

Witnesses:

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